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ABSTRACT

The relationship between education and job satisfaction has not been sufficiently well documented to qualify as unquestionable. Published research on the subject either fails to adequately assess the influence of education on job satisfaction or is too occupationally and/or geographically limited to form the basis for generalization. To examine on a larger scale the association between education and job satisfaction, four national household surveys of the American work force conducted by the University of Michigan's Survey Research Center in 1969, 1971, and twice in 1973 were analyzed. One hypothesis was that in small occupationally homogeneous samples those with higher educational levels would be less satisfied than others. Regarding education and overall job satisfaction, no support was provided for assuming that job satisfaction increases with each advance in educational level attained. On the other hand, overall quality of employment was associated with educational level, but large increments in quality of employment occurred only at those points where educational credentials are conferred. Future work on the relationship should involve several types of secondary analyses: treating education operationally in terms of quality and type rather than simply level; identifying the contribution of education to the relative importance that workers assign to different aspects of their jobs; and accounting for modifications in individual aspirations throughout life. (JR)

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EDUCATION AND JOB SATISFACTION: A QUESTIONABLE PAYOFF

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A recent review of seven national surveys dating back to 1958 concluded that for each increment of education--measured by years of education completed--there was not a corresponding payoff in terms of increased job satisfaction (Quinn, Staines, and McCullough, 1974). While this conclusion may be limited by the measures of education and satisfaction used, it is nevertheless instructive because it challenges the generally held assumption that the higher an individual's education, the greater the chances of securing a desired and hence satisfying job. This assumption is often used, for example, to justify changes in schools and in access to schools as ways of reducing social inequities (Coleman, 1966). The relationship between education and job satisfaction has not been sufficiently well demonstrated, however, to qualify as an unquestionable assumption. The magnitude of the relationship, as well as its form and its generality have yet to be established conclusively. Moreover, the social and psychological processes that may link education and job satisfaction are scarcely understood.

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The absence of such information is particularly surprising considering how frequently matters of education, work, and job satisfaction have been investigated. Part of this absence undoubtedly stems from the justifiably limited foci of these investigations. Work-related

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studies of education have, for example, tended to be of two types, neither of which has anything to do with job satisfaction. One type emphasizes problems related to the impact of variables such as socio-economic status, race, sex, and age on the opportunities for entrance into specific types of schools (in terms of quality) with some inferences on the effects this would have on the type of job the individual could subsequently obtain. The collection of articles in a special 1968 edition of the Harvard Educational Review represents such an approach. The most recent and comprehensive such study, Boudon's (1973) Educational Opportunity and Social Inequality follows along similar lines. A second and frequent perspective has been provided by various manpower studies. These studies, represented by the series conducted by the Organization for Economic Co-operation and Development, characterize the correspondence between supply and demand by keeping track of the number of jobs available among different levels of educational requirements and branches of education. For the most part studies of educational phenomena have placed their attention on the input problem--input into a specific type and level of education--leaving aside the output problem--the consequences of holding a specific educational credential for the access to a specific job or position for the individual. In his latest study, however, Jencks (1972) brings into consideration the input-output problem and its links with the sphere of work, educational achievement, and job related attitudes. This topic, also treated by Berg (1971), moves the focus of attention away from school input and operations to school output recognized through consequences of schooling for the individual rather than the economic system.

As a result of these concentrations of interest in the area of work and education, little attention has been paid by educationally concerned

investigators to job satisfaction and related attitudinal issues. The relevant research has by default fallen largely into the hands of social psychologists of organizations. Unfortunately, these social psychologists seem to have little interest in education per se. While they genuflect to the necessity of routinely using demographic variables, including education, in their investigations, their explanations of the correlates of such variables tend to be both superficial and unenthusiastic.

A profitable beginning in any analysis is often made by asking a very naive question. In this instance the question is: why should there be any association between education and job satisfaction?

In spite of its rather insubstantial empirical foundations, there remains a very widespread theoretical assumption among psychologists that there are three distinct factors that contribute to job satisfaction. On the environmental side there is the quality of employment (e.g., how good the pay is, how convenient the hours are, how interesting the work is). On the personal side, there are the needs, values, and expectations of the worker. There is also the degree of congruence between these two sets of conditions. These three concepts basically define the psychological calculus that may determine the overall level of a worker's job satisfaction. Education has implications for each.

First, education may enhance a worker's chances of securing a job where the quality of employment is high. At least two mechanisms may heighten these chances. Education may impart those skills that are demanded by the labor market and therefore give a person an advantageous position in bargaining for jobs with good quality of employment. In addition, most jobs require that a candidate meet minimum educational

standards. While not necessarily teaching relevant skills, the educational system may nevertheless confer diplomas and degrees that qualify an individual to meet these standards.

Education has also been assumed to affect the second component of the psychological calculus of job satisfaction--the needs, values, and expectations of the worker. As a socializing agent the educational system of any society has as its primary function the internalization by those subject to its influence of certain values and norms. These norms will allow them to comply with those patterns of behavior that are required in the performance of specific roles within a specific set of social conditions--e.g., citizen, agent of production, mother, father, or consumer. The individual who is graduated by the system is assumed to have developed certain skills and a related set of value-orientations. These may emerge only in part as a product of formal training. They may also emerge as a consequence of more "informal" aspects of one's educational experience--e.g., teacher-student relationships (Dreeben, 1968; Gottlieb, 1968) and one's peer environment (David, 1966; Alexander and Campbell, 1968; St. John, 1971).

Education may also play a role in determining the degree of congruence between working conditions on one hand and the needs, values, and expectations of workers on the other hand. Most fundamentally, education may provide a more sophisticated knowledge of job-seeking techniques. More importantly, it may increase the range of job opportunities available to a worker. Since the range of job opportunities available to a well-educated worker is greater than that available to others, the chances of a well-educated worker securing a job characterized by good quality of employment may therefore be enhanced. But this does not

necessarily insure that the well-educated worker will be satisfied with the job that he or she secures from this increased range of job opportunities. Education may have effected so many alterations in the worker's needs, values, and expectations that many jobs, while available, are nevertheless personally unacceptable. A corporate executive is educationally qualified to be a clerk-typist, but whether he or she would be satisfied with this underemployment is dubious. Furthermore, where advanced education develops only highly specialized skills, the range of "acceptable" jobs may in fact be reduced.

All these considerations of the possible effects of education upon those processes that determine workers' overall job satisfaction suggest that, if all social systems were functioning properly, there should be a very substantial association between education and job satisfaction.

In order to determine the form and magnitude of this relationship, we engaged in two activities. The first was a review of existing research on the association between education and job satisfaction. The other was a secondary analysis of several large national sample surveys of the American work force. So far our secondary analyses have dealt exclusively with level of education. This limited focus is currently being expanded to include type and quality of education as well.

Previous research

A systematic search of published materials in the fields of sociology, psychology, and educational produced only 20 empirical investigations suited to our research interests. Of these, twelve included a direct analysis of the relationship between education and job satisfaction, and the rest dealt with the association between education and other

attitudes toward work. Of those twelve studies that dealt directly with the relationship between education and job satisfaction, three found a positive association between the two variables (Wherry, 1954; Klein and Maher, 1960; Johnson and Johnson, 1972). Four found a negative association between education and job satisfaction (Vollmer and Kinney, 1955; Form and Geschwender, 1962; Larsen and Owens, 1965; Blood, 1969). Five showed no association between education and job satisfaction (Ash, 1954; Sinha and Sarma, 1962; Kahn, et al., 1964; Vaughn and Dunn, 1972; Cooke et al., unpublished).

One of our hypotheses was that in small samples, homogeneous in terms of occupation, and therefore also fairly similar with regards to educational requirements, those with higher education would be less satisfied than others. The underlying assumption here was that those individuals with higher education would be overeducated for their jobs. Even though this hypothesis could not be tested conclusively with findings from so few studies, it is nevertheless interesting that three of the studies using quite occupationally homogeneous samples--Form and Geschwender's study of manual workers (1962), Larsen and Owen's study of crew members (1965), and Blood's study of low-skill level technicians in the air force (1969) reported a negative relationship between education and job satisfaction. On the other hand, two of the three studies that report positive associations between education and job satisfaction (Wherry, 1954; Johnson and Johnson, 1972) used samples that covered a wide range of occupations. In trying to account for the disparity of results among those studies reviewed, we looked for any systematic differences in the treatment of the two main variables--education, job satisfaction. Most studies operationalized education in terms of years

or level. Only three studies operationalized it as type--i.e., major field of high school curriculum, technical or academic field (Minor, 1958; Fullan, 1970; Johnson and Johnson, 1972). Neither was there systematic difference among the studies that showed positive, negative, or no associations between education and job satisfaction attributable to their operationalization of satisfaction (facet-free versus facet-specific) or their control of possible confounding variables, such as age.

Secondary analyses

The existing research concerning the relationship between education and job satisfaction had been confined to very limited populations, usually workers in specific occupations and/or in specific employing establishments. The numbers and types of workers involved in such investigations were usually too small to justify any generalizations about the association between education and job satisfaction among the American work-force. Our secondary analyses were therefore confined to four national household surveys of the American work force conducted by The University of Michigan's Survey Research Center in 1969, 1971, and twice in 1973 (Quinn, et al., 1970; Taylor and Bowers, 1972; Quinn and Shepard, 1974; Campbell, Converse, and Rodgers, in press.

Education and overall job satisfaction. Two of these national surveys provided two distinct types of measures of overall job satisfaction. They provided, first, a "facet specific" measure that assessed overall satisfaction from the worker's satisfaction with particular job facets, such as pay, how interesting the work was, and hours. They also provided a "facet free" measure based upon very general questions that

in no way referred to particular job facets--for example, "All in all, how satisfied are you with your job?". The relationship between education level and job satisfaction was assessed through one-way analyses of variance where five levels of education were distinguished as a categorical independent variable and job satisfaction was treated as a continuous dependent variable.

According to Table 1, the form of the relationship between education level and job satisfaction was the same in the three instances where it was statistically significant. Eta coefficients of association ranged from .00 to .13. The only consistent pattern was an increase in overall satisfaction between those who had attained only some college education but no college degree and those who had attained a college degree. In all instances, people with only "some college" education were either the most dissatisfied with their jobs or were at least among the most dissatisfied education groups. The association between education level and job satisfaction was, therefore, "positive" only in their grossest sense, weak, and hardly linear. Methodologically, these findings cast a shadow upon previous investigations of the same relationship because of their frequent use of statistics that assumed the relationship to be monotonic or, even worse, linear. Substantively, they fail to support the assumption that for each increment in education there is a corresponding occupational payoff in terms of job satisfaction.

There remained, however, the possibility that the small relationship between education level and overall job satisfaction was the net result of offsetting relationships between education level and more specific aspects of jobs. To test this possibility we examined the relationship in the 1973 survey between education level and satisfaction with four

aspects of jobs: having a challenging job; having a comfortable, trouble-free one; being well-rewarded financially; and receiving resources adequate for performing one's job. Workers with more education were found to be significantly more satisfied than others with both the challenge and the financial rewards of their jobs. There was no significant relationship between education level and satisfaction with either comfort or resource adequacy. Consequently, no support was provided for the contention that better-educated workers were conspicuously more satisfied than others with some aspects of their jobs but less satisfied with other aspects--thereby producing only a small net relationship between education level and overall job satisfaction.

Education and quality of employment. The psychological calculus that determines a worker's job satisfaction is based on both a worker's needs and also on the rewards provided by the occupational environment. The concept of quality of employment refers to those conditions of work that can be regarded as occupational rewards and that are likely to have some impact on workers' attitudes, behaviors, or physical health. Pay is the obvious one, but there are many others. All involve characteristics of the work environment that, while usually measured by workers' reports, are at least potentially measurable by other means. Two national surveys assessed overall quality of employment through workers' reports, and Figure 1 shows the mean quality of employment of workers with different levels of education.

Overall quality of employment was positively and significantly ($p < .001$) associated with education level. The eta coefficient of association, .26, indicated that quality of employment was more closely associated with education level than was job satisfaction. Nevertheless,

the amount of variance in quality of employment explainable in terms of education level remained small.

But simply noting that the relationship in Figure 1 is "positive" conceals its fascinating non-linearity. Every increment in years of education was not accompanied by an equally great increment in quality of employment. Instead, the latter increments occur at those points where educational credentials are conferred. Little is gained in quality of employment by going from grade school to obtaining some high school education but no diploma, or by going from high school to obtaining some college education but no degree. The payoff comes only when the diploma or degree is conferred.

Additional analyses focused four aspects of quality of employment that constituted the overall measure: challenge, comfort, financial rewards, and resource adequacy. These analyses indicated that most of the relationship in Figure 1 between education level and overall quality of employment was due to the increases of challenging work and financial rewards associated with increased education. Education level was related neither to having a comfortable job nor to receiving adequate resources. The strong credentials effect apparent in the analysis of the overall quality of employment measure appeared most conspicuously with regard to challenge, and somewhat less so with regard to financial rewards.

Future problems and analyses

Our continuing efforts to understand the contribution of education to job satisfaction will include several types of secondary analyses, some of them already underway. One we have already mentioned--treating

education operationally in terms of quality and type rather than simply level. Further refinements in the measurement of education level will also be undertaken. In the analyses reported in this paper we confined ourselves to education level expressed in absolute terms. But education level may also be expressed in terms of deviation from the average number of years of education attained by others in some occupationally-relevant reference group--such as others in one's occupation or one's work group. Our assumption in expressing education thus is based on the trend identified in our review of previous investigations--namely, that the more occupationally homogeneous the sample studied was, the greater was the tendency for the association between education level and satisfaction to be negative, since those who were relatively more educated would be receiving relatively less occupational returns on their educational investments. So far, our secondary analysis of data provided by studies of workers in 40 employing establishments has indicated that when education is expressed in terms of deviation from the average education level of one's work group its relationship to overall job satisfaction is a statistically significant negative one.

Another line of our future analyses involves identifying the contribution of education to the relative importance that workers assign to different aspects of their jobs. Relative importance is critical in understanding the psychological calculus that determines a worker's overall job satisfaction. If some job aspect is very important to an individual, then satisfaction with that aspect should, theoretically, more markedly affect his or her overall job satisfaction than it affects the overall satisfaction of someone who regards the

same aspect of the job as unimportant. Moreover, an understanding of the effects of education on motivation may contribute to an understanding of the credentials effect, since one explanation of this effect is that, while education increases levels of occupational aspiration, it provides the means of fulfilling these aspirations only at those points where diplomas or degrees are conferred.

Finally, it sould be considered that what an individual aspires to in terms of societal rewards in general and occupational rewards in particular, as well as how much he or she expects when leaving school, is subject to modifications throughout life. Most conspicuously, it may be subject to the aspirations held by the changing groups that the individual takes as frames of reference. In attempting to explain the weak association between education and job satisfaction, Jencks (1972) asserts that

> ...people evaluate a job by comparing it with other jobs their friends have, not by comparing it with some hypothetical national norm. If this theory were correct we would not expect executives to be much more satisfied than unskilled workers.... If educated people compare themselves to other people with similar amounts of education, the educated and the uneducated will inevitably turn out equally satisfied or dissatisfied.

Form and Geschwender (1962) have provided evidence that there might be yet another frame of reference relevant to the determination of job satisfaction--father's occupation. By focusing upon relative rather than absolute levels of education and upon inter-generational mobility in terms of both education and occupation, we will be making considerable use of the concept of frames of reference in our future analyses.

While these analyses may serve to untangle the complex relationship between education and its occupational payoff in terms of job satisfaction,

they will probably do little to alter the basic finding of ourselves and others: that the payoff is small indeed. But why is the association between education level and job satisfaction not higher than might be superficially expected?

One approach to answering this question focuses upon the three major work-relevant functions of education that we distinguished earlier--the contribution of education to quality of employment, to the needs, values, and expectations of workers, and to the degree of congruence between these two sets of conditions. Is there any reason to think that the American educational system adequately serves all of these functions? The answer to this is "probably not," and the reasons for this answer may lie in certain ambivalences in the relationship between American educational institutions and other aspects of American society. A major function of the educational system is to train people as both producers and consumers of goods and services. But other cultural values with non-economic implications intrude. These values attach to education a worth in excess of its "payoff" in terms of income or prestige, emphasizing mainly educational benefits in terms of individual or collective participation and gratification in the society's major institutions. In any event, many aspects of the relationship between work and education--particularly overeducation--can be understood under the assumption of a lack of integration of societal goals. This lack of integration provides the social context within which the psychological processes relevant to job satisfaction may be understood.

Table 1

Mean Job Satisfaction (z scores), by Education Level

Date of Survey	Type of job satisfaction measure used	Education Level					F-ratio	eta
		Grade school or less	Some high school	Completed high school	some college	Completed college		
1973	Facet free	.01 (N=174)	-.07 (N=210)	-.09 (N=561)	-.02 (N=306)	.28 (N=236)	6.07**	.13
	Facet specific	.00 (N=164)	.00 (N=203)	-.05 (N=553)	-.07 (N=293)	.21 (N=234)	3.41*	.08
	Facet specific	.01 (N= 61)	.04 (N=145)	-.01 (N=321)	-.13 (N=174)	.08 (N=169)	1.18	.07
1971	Facet free	.00 (N=158)	-.02 (N=195)	.02 (N=362)	-.15 (N=134)	.17 (N=113)	1.64	.08
1969	Facet free	.01 (N=238)	.13 (N=269)	-.03 (N=551)	-.06 (N=253)	.28 (N=211)	5.80**	.13
	Facet specific	.01 (N=230)	-.01 (N=265)	.00 (N=549)	-.01 (N=252)	.04 (N=211)	0.12	.00

*p<.05

**p<.001

Figure 1

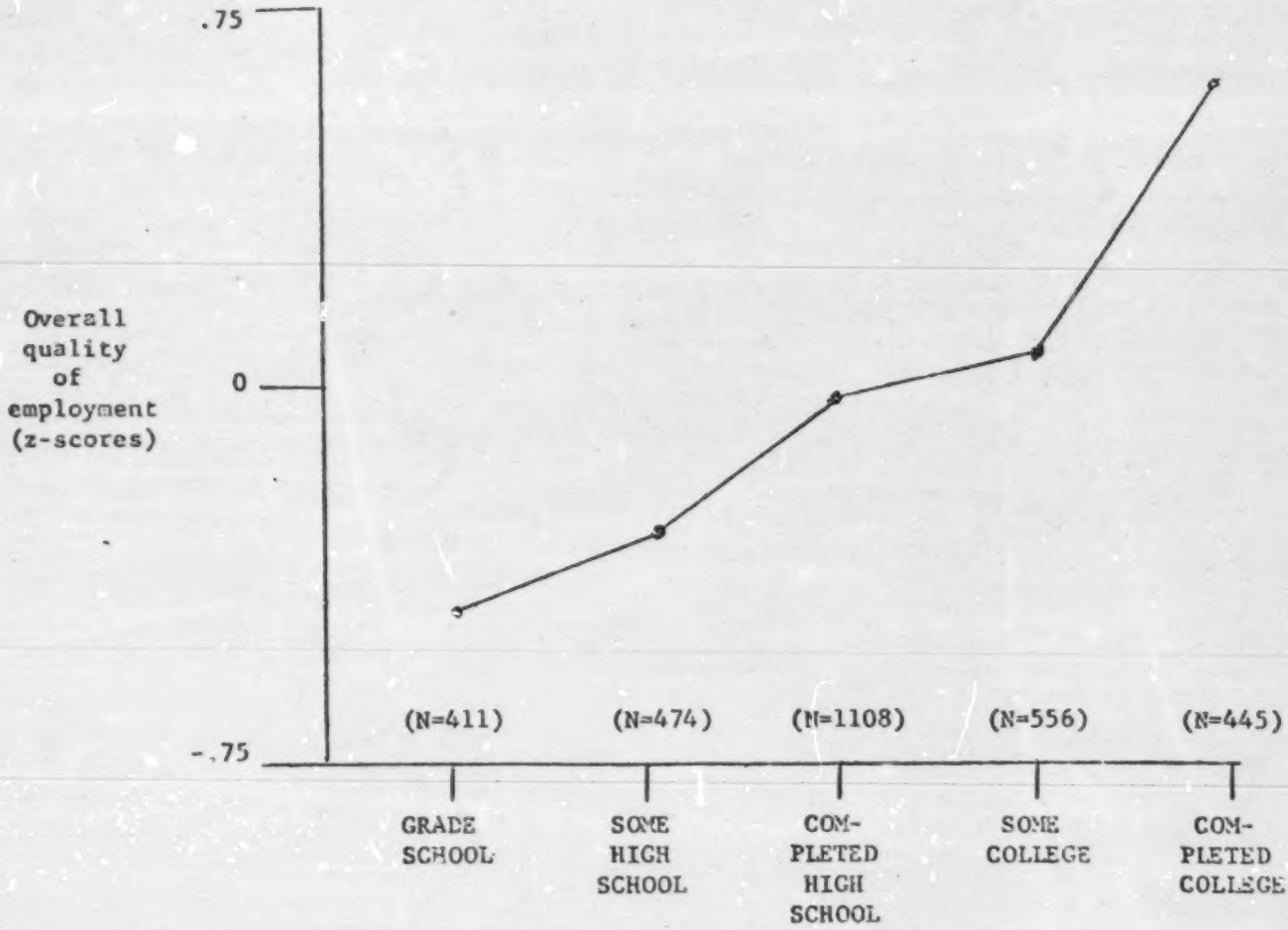

Figure 1. Mean Overall Quality of Employment, by Education Level (N=2994)

Note: A high quality of employment score, as expressed in a z score, indicates greater quality of employment. The association between quality of employment and job satisfaction was significant beyond the .001 level as indicated by a one-way analysis of variance. The eta coefficient of association was .26.

Source: The 1969-70 Survey of Working Conditions and the 1972-73 Quality of Employment Survey (combined sample from both surveys)

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